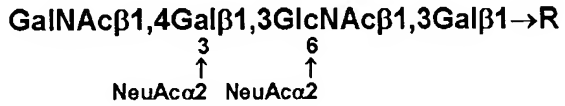
What is claimed is:

1. A method for diagnosing prostate cancer, comprising detecting the presence of or elevated levels of RM2 antigen, having the epitope structure shown below, in a specimen from a patient suspected of having prostate cancer:



wherein R represents a carrier.

2. The method of claim 1, wherein said method further comprises contacting said specimen with at least one antibody that specifically binds to said RM2 antigen, and detecting the presence of said antigen by specific binding of antibody to antigen

3. The method of claim 2, wherein said at least one antibody is selected from the group consisting of a polyclonal antibody, a single chain polyclonal antibody, a polyclonal antibody fragment, a monoclonal antibody, a single chain monoclonal antibody, a monoclonal antibody fragment, a chimeric antibody, a single chain chimeric antibody, a chimeric antibody fragment, a resurfaced antibody, a resurfaced single chain antibody, a resurfaced antibody fragment, a humanized antibody, a humanized single chain antibody, and a humanized antibody fragment.

4. The method of claim 2, wherein said at least one antibody is a monoclonal antibody.

5. The method of claim 2, wherein said at least one antibody is directed to the epitope recognized by RM2 monoclonal antibody.

6. The method of any one of claims 1 or 2, wherein said specimen is a prostate biopsy sample.

7. The method of any one of claims 1 or 2, wherein said specimen is a specimen from a total prostatectomy.

8. The method of any one of claims 1 or 2, wherein said specimen is a serum sample.

9. The method of claim 2, wherein the presence of said antigen is detected by immunohistology; sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE) followed by Western Blot analysis; labeled secondary antibody directed to primary antibody that binds to said antigen; surface plasma resonance (SPR) spectroscopy; or molecular force microscopy.

10. The method of claim 2, wherein said specimen is a prostate biopsy sample and the presence of said antigen is detected via immunohistology, labeled secondary antibody directed to primary antibody that binds to said antigen, surface plasma resonance (SPR) spectroscopy, or molecular force microscopy.

11. The method of claim 2, wherein said specimen is a specimen from a total prostatectomy and the presence of said antigen is detected via immunohistology, labeled secondary antibody directed to primary antibody that binds to said antigen, surface plasma resonance (SPR) spectroscopy, or molecular force microscopy.

12. The method of claim 2, wherein said specimen is a serum sample and the presence of said antigen is detected via SDS-PAGE followed by Western blot analysis.

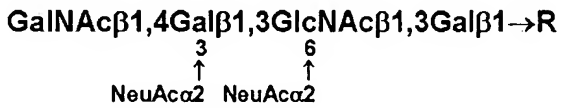
13. The method of claim 10, wherein said at least one antibody is directed to the epitope recognized by RM2 monoclonal antibody.

14. The method of claim 11, wherein said at least one antibody is directed to the epitope recognized by RM2 monoclonal antibody.

15. The method of claim 12, wherein said at least one antibody is directed to the epitope recognized by RM2 monoclonal antibody.

16. A kit for diagnosing prostate cancer, comprising:

(a) At least one moiety that specifically binds to RM2 antigen, having the epitope structure shown below, from a specimen obtained from a patient suspected of having prostate cancer:



wherein R represents a carrier,

(b) Instructions for diagnosing prostate cancer using said kit, and

(c) Optionally, a means for detecting the presence of said antigen by specific binding of said moiety to said antigen.

17. The kit of claim 16, wherein the moiety that specifically binds to said RM2 antigen is an antibody.

18. The kit of claim 16, wherein said antibody is selected from the group consisting of a polyclonal antibody, a single chain polyclonal antibody, a polyclonal antibody fragment, a monoclonal antibody, a single chain monoclonal antibody, a monoclonal antibody fragment, a chimeric antibody, a single chain chimeric antibody, a chimeric antibody fragment, a resurfaced antibody, a resurfaced single chain antibody, a resurfaced antibody fragment, a humanized antibody, a humanized single chain antibody, and a humanized antibody fragment.

19. The kit of claim 16, wherein said moiety that specifically binds to said RM2 antigen is an antibody.

20. The kit of claim 16, wherein said moiety that specifically binds to said RM2 antigen is a monoclonal antibody.

21. The kit of claim 16, wherein said moiety that specifically binds to said RM2 antibody is directed to the epitope recognized by RM2 monoclonal antibody.

22. The kit of any one of claims 16 or 17, wherein said specimen is a prostate biopsy sample.

23. The kit of any one of claims 16 or 17, wherein said specimen is a specimen from a total prostatectomy.

24. The kit of any one of claims 16 or 17, wherein said specimen is a serum sample.

25. The kit of claim 16, wherein the presence of said antigen is detected via immunohistology; sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE) followed by Western Blot analysis; labeled secondary antibody directed to primary antibody that binds to said antigen; surface plasma resonance (SPR) spectroscopy; or molecular force microscopy.

26. The kit of claim 17, wherein said specimen is a prostate biopsy sample and the presence of said antigen is detected by immunohistology; labeled secondary antibody directed to primary antibody that binds to said antigen; surface plasma resonance (SPR) spectroscopy; or molecular force microscopy.

27. The kit of claim 17, wherein said specimen is a specimen from a total prostatectomy and the presence of said antigen is detected by immunohistology; labeled secondary antibody directed to primary antibody that binds to said antigen; surface plasma resonance (SPR) spectroscopy; or molecular force microscopy.

28. The kit of claim 17, wherein said specimen is a serum sample and the presence of said antigen is detected via SDS-PAGE followed by Western blot analysis.

29. The kit of claim 17, wherein said specimen is a sample from a body secretion and the presence of said antigen is detected via SDS-PAGE followed by Western blot analysis.

30. The kit of claim 26, wherein said at least one antibody is directed to the epitope recognized by RM2 monoclonal antibody.

31. The kit of claim 27, wherein said at least one antibody is directed to the epitope recognized by RM2 monoclonal antibody.

32. The kit of claim 28, wherein said at least one antibody is directed to the epitope recognized by is RM2 monoclonal antibody.

33. An isolated prostate tissue sample comprising RM2 antigen.